3

EXISTING ENVIRONMENT

This chapter provides an overview of the existing environment in the vicinity of the proposed rail line construction.

3.1 LAND USE

3.1.1 Current Land Use and Zoning

The project is located in a rural area in northwest Calhoun County. The proposed 7.8-mile rail line would extend between the UCC Seadrift facility and the existing UP Port Lavaca Branch near Kamey on State Highway 87. This line would cross largely unincorporated land in Calhoun County.

The area surrounding the proposed project is primarily agricultural land, consisting of active cropland, fallow fields, and range land for grazing. The preferred alternative route would cross approximately 4.5 miles of cropland, 2.3 miles of fallow field or range land, 0.8 mile of sparsely wooded areas, and 0.1 mile of developed roadways.

There are no county land use plans or zoning ordinances in place for the project area. Regulations on municipal subdivision plots and building permits are used to manage local land development.

3.1.2 Prime Farmlands

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) maintains a national database of prime farmlands. SEA contacted the local NRCS office to determine whether prime farmland soils were located in the vicinity of the proposed project. According to the NRCS and the *Soil Survey of Calhoun County, Texas* (1978), prime farmland soils are located in the project area and include: Dacosta-Contee complex, 0-1% slopes (Dc), Lake Charles clay, 0-1% slopes, Midland clay loam (Mb), Midland clay loam, low (Mc), and Midland-Dacosta complex (Md).

As noted above, most of the proposed route is within agricultural land uses, including row crops and pastures for livestock grazing. The dominant row crops within the project area are

corn, cotton, and sorghum. The majority of row crops in the area are located within the Lake Charles and Dacosta-Contee soils.

The Farmland Protection Policy Act of 1981 (FPPA) requires that Federal agencies consider alternatives to projects that would result in conversion of agricultural land. The 1985 Farm Bill revised the FPPA (P.L. 97-98, Sec. 1539-1549; 7 U.S.C. 4201, *et seq.*) to provide for limited enforcement of the requirements of the FPPA. When considering a Federal program that may adversely affect farmland, the proponent agency must first request a review by the appropriate NRCS office of USDA in order to determine whether the land at issue is subject to the FPPA as farmland. NRCS is required to notify the proponent agency of this determination. To assist in this determination, SEA has provided NRCS with information necessary to complete Form AD-1006 "Farmland Conversion Impact Rating".

3.1.3 Coastal Zones

The Coastal Zone Management Act of 1972 (16 USC 1451 *et seq.*) requires states to develop programs to implement policies to preserve, protect, develop, and restore coastal resources. Federal actions proposed within the coastal zone of Texas are reviewed for consistency with state-approved management plans and regulatory programs. Enforceable regulatory programs comprising the Texas Coastal Management Program (TCMP) include waters of the open Gulf of Mexico or waters under tidal influence, submerged lands, coastal wetlands, seagrasses, tidal sand and flats, oyster reefs, hard substrate reefs, coastal barriers, coastal shore areas, Gulf beaches, dune areas, special hazard areas, critical erosion areas, coastal historic areas, and coastal preserves. The entire proposed action is within the Port Lavaca Area of the Texas Coastal Management Zone.

3.2 SOCIOECONOMICS

3.2.1 Demographics

According to the 2000 Census, Calhoun County had a population of 20,647 in 1999. This population represents an 8.4 percent increase over the 1990 population. Based on the land area for the county, 512.4 square miles, the calculated population density is 39.9 people per square mile. However, Port Lavaca, the county seat of Calhoun County, has a population of 12,035, which represents more than 50 percent of the population of the county. The second largest population center in the county is Seadrift, with 1,352 residents. Additional small communities are located at Point Comfort (on State Highway 35, two miles east of Port Lavaca), Long Mott (on State Highway 185, south of State Highway 35), and Kamey (a small settlement along US 87 just north of the proposed point of connection). The area of the proposed rail line, from Kamey to Seadrift, is primarily agricultural with dispersed housing. The alignment follows the property lines of 9 privately owned parcels—only 2 of which contain residential units within 2,500 feet of the proposed rail line.

The project area is located within U.S. Census Tracts 9904 and 9905. In 2000, 46 percent of

the county's population was located in these two census tracts. The two tracts contain 38 census blocks. Only 14 of these blocks, which comprise the study area, considered for analysis, are occupied.

According to 2000 census data, whites constituted the largest racial group in Calhoun County (58.6 percent of the total population), followed by Hispanics (40.9 percent), Asians (3.2 percent), blacks (2.5 percent) and American Indians (0.3 percent). Minority groups generally constitute a slightly lower percentage of the population in the study area compared with that of the county as a whole (see Table 3-1). In 2000, whites constituted 58.6 percent of the study area's population, followed by Hispanics (36.2 percent), American Indians (1.9 percent) blacks (1.6 percent), and Asians (0.5 percent).

3.2.2 Employment

As depicted in Table 3-2, the manufacturing industry, made up of 20 establishments, is the largest revenue-producing industry in Calhoun County. Manufacturing's approximate $2.7 billion in revenue in 1997 was approximately 258 times greater than the sales produced by the second-rated industry, retail trade (77 establishments). Manufacturing also produced approximately four times as many jobs as retail trade, followed by accommodation and food services, health care and social assistance, and professional, scientific, and technical services.

According to the Texas Workforce Commission (TWC), as of April 2001, the unemployment rate for Calhoun County was 5 percent. This represents an increase from the 4 percent unemployment reported in 2000, but is lower than the unemployment rates of 7 to 10 percent experienced by the county between 1996 and 1998.

According to the U.S. Bureau of Economic Analysis, the 1999 per capita income for Calhoun County was $21,121. This figure represents a 6.4 percent increase over the 1998 per capita income of $19,858, and a 14.7 percent increase over the 1997 per capita income of $18,412.

3.2.3 Public Services

Public services, including police, fire protection, medical services, and schools, are located in Port Lavaca, Victoria, Seadrift, Refugio, and Point Comfort. The project area is served by the "911" emergency system. Various law enforcement, medical assistance, and fire protection departments are available through this system. All emergency public services are available on a 24-hour basis. Medical facilities are located in Port Lavaca, Refugio (on Route 77), and Victoria (also on US 87 northeast of Port Lavaca) and include emergency medical (ambulance services), medical clinics, and hospitals. The nearest hotels to the project area are in Port Lavaca, Seadrift, Victoria, Point Comfort, and Refugio.

Table 3-1
PROJECT AREA POPULATION CHARACTERISTICS

Tract	Block	Total	White	% White	Black	% Black	American Indian	% American Indian	Asian	% Asian	Hawaii / Pacific Isle	% Hawaii / Pacific Isle	Hispanic	% Hispanic	Two or More Races	% Two or More Races	Some Other Race	Total Minority	% Minority
9904	2016	5	4	80.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	20.0%	0	0	0.0%
9904	2028	6	4	66.7%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	2	33.3%	0	0.0%	0	2	33.3%
9904	2073	16	14	87.5%	2	12.5%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	2	12.5%
9904	2079	11	7	63.6%	4	36.4%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	4	36.4%
9904	2081	32	13	40.6%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	19	59.4%	0	0.0%	0	19	59.4%
9904	2098	9	9	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
9904	2101	1	1	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
9904	2102	39	34	87.2%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	5	12.8%	0	0.0%	0	5	12.8%
9904	2103	8	8	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
9904	2104	64	39	60.9%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	25	39.1%	0	0.0%	0	25	39.1%
9905	1055	4	4	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
9905	1056	43	32	74.4%	0	0.0%	0	0.0%	2	4.7%	0	0.0%	9	20.9%	0	0.0%	0	11	25.6%
9905	1057	127	44	34.6%	0	0.0%	7	5.5%	0	0.0%	0	0.0%	73	57.5%	3	2.4%	0	80	63.0%
9905	1058	2	2	100.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0	0	0.0%
Study		367	215	58.6%	6	1.6%	7	1.9%	2	0.5%	0	0.0%	133	36.2%	4		0	148	40.3%
Calhoun		20,647	10,774	52.2%	521	2.5%	55	0.3%	665	3.2%	7	0.0%	8,448	40.9%	161		16	9696	47.0%

Source: U.S. Census Bureau, Census 2000 Redistricting Data (Public Law 94-171) Summary File, Matrices PL1 and PL2.
Note: Total population of several census blocks are too small (below 85) for significant statistical analysis (see Section 3.3 Environmental Justice).

Table 3-2
ECONOMIC STATISTICS FOR CALHOUN COUNTY, TEXAS

Industry	Number of Establishments	Sales, Receipts, or Shipments ($1,000)	Annual Payroll ($1,000)	Paid Employees
Manufacturing	20	2,689,330	208,791	3,815
Wholesale Trade	29	51,850	3,716	135
Retail Trade	77	111,116	10,274	725
Real Estate Rental and Leasing	16	12,660	1,945	81
Professional, Scientific, & Technical Services	30	16,618	9,246	270
Administrative Support, Waste Management & Remediation	11	7,162	1,842	122
Educational Services	1	D	D	(1-19)
Health Care & Social Assistance	25	11,885	4,875	288
Arts, Entertainment & Recreation	4	809	193	12
Accommodation & Food Services	53	15,209	4,157	524
Other Services	31	5,732	1,574	106

D = Data withheld to avoid disclosure.
Source: U.S. Census Bureau, 1997 Economic Census.

3.3 ENVIRONMENTAL JUSTICE

3.3.1 Environmental Justice Authority

Executive Order (EO) 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, directs Federal agencies to "promote nondiscrimination in Federal programs substantially affecting human health and the environment, and provide minority and low-income communities access to public information on, and an opportunity for public participation in, matters relating to human health or the environment." EO 12898 also directs agencies to use existing law to ensure that when they act:

- They do not discriminate on the basis of race, color, or national origin;
- They identify and consider disproportionately high and adverse human health or environmental effects of their actions on minority and low-income communities; and
- They provide opportunities for community input in the National Environmental PolicyAct of 1969 (NEPA) process, including input on potential effects and mitigation measures.

EO 12898 provides the following definitions of the terms "minority" and "low-income" in the context of Environmental Justice (EJ) analysis. Minority individuals are members of the following population groups: American Indian or Alaskan Native, Asian or Pacific Islander, Black (not of Hispanic Origin), and Hispanic. A low-income-household is one where the median household income is below the Department of Health and Human Services poverty guidelines.

The Council for Environmental Quality (CEQ) has oversight for the Federal government's compliance with EO 12898 and the NEPA process. CEQ has prepared guidance to assist Federal agencies with their NEPA procedures so that EJ concerns are effectively identified and considered. Likewise, the U.S. Department of Transportation (DOT) and the U.S. Environmental Protection Agency (EPA) have drafted guidelines to provide these agencies with guidance to integrate EJ requirements into the decision making process.

3.3.2 Identification of Environmental Justice Populations

According to the CEQ guidelines, minority populations should be identified where either (a) the minority population of the affected area exceeds 50% or (b) the minority population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographic analysis. A minority population also exists if there is more than one minority group present and the minority percentage, as calculated by aggregating all minority persons, meets one of the thresholds.

The study area for this EJ analysis is located in a rural, sparsely populated portion of Calhoun County. Year 2000 U.S. Census statistics used for this analysis indicate the population density for study area census blocks range primarily between 2 and 32 persons per square mile. These statistics are meant to provide a profile of the individuals living in the study area. Subsequent impact analysis performed for this project considers the specific geographic location of residents potentially impacted by the project.

The U.S. Census Bureau is in the process of releasing 2000 Census data. The most relevant complete data from the 2000 Census was used for this study in the identification of target populations, including racial characteristic data at the census block level. Some of this data is still in draft form. There is no poverty-level data currently available from the year 2000 Census; therefore, to characterize minority and low-income populations in the project study area, population and income-level data from the 1990 Census was used.

3.3.3 Environmental Justice Screening

CEQ guidelines require EJ analysis of impacts to minority and low-income populations that exist with a percentage that is "meaningfully greater" than the percentage for the general population. This is done to avoid artificial inflation or dilution of the affected minority population. Although there are currently no Federal guidelines that provide a definition of a "meaningfully greater" percentage, two EJ thresholds have been developed for this project.

Minority and low-income populations must meet one of two standards to be considered as a target EJ population. First, areas meet the standard where 50 percent of the census block's population is minority or below the poverty level. Second, areas where the census block's minority or below- poverty-level population is 10 percentage points higher than the

comparison population (in this analysis either the county or the project area) also meet the standard for EJ populations.

The project area's population is based on the population of the 14 occupied census blocks previously identified. Census blocks that meet EJ thresholds for further analysis have been identified in Table 3-1. Four census blocks meet both the county-level and project-level EJ thresholds for analysis based on the percentage of minority residents (see Figure 3-1). These census blocks met the EJ thresholds for racial groups based on the following characteristics:

- Census Tract 9904, Block 2073 is bordered on the north and east by Farik Road, on the west by Route 185, and to the south by Whatley Road. Black residents comprise 12.5 percent of the block's population, which exceeds the study area threshold for black residents by approximately 10 percent.
- Census Tract 9904, Block 2079 is bordered to the northwest and southwest by farm roads, and on the northeast by Route 1679. This block exceeds the study area and county EJ threshold for blacks. A total of 36 percent of the residents of this block are black, while the percentage for the study area as a whole is 1.7 percent and 2.6 percent for the county.
- Census Tract 9904, Block 2081 is bordered by Sanders Road to the east, Farm Road 1679 to the northwest, and Shannon Lane to the south. Hispanic residents make up over 59 percent of this block's population, which exceeds the study area and county EJ thresholds for Hispanics by approximately 23 percent.
- Census Tract 9905, Block 1057 is bordered by Route 185 on the west, Route 35 to the south, and Whatley Road on the north and east. Hispanic residents account for 57 percent of the block's population, which exceeds the study area and county thresholds for Hispanics by approximately 20 percent.

3.4 TRANSPORTATION AND SAFETY

3.4.1 Rail Transportation Systems

BNSF will operate the proposed line, utilizing trackage rights on the UP Angleton Subdivision and Port Lavaca Branch to reach the proposed rail line at Kamey. The Angleton Subdivision
constitutes part of the Union Pacific main line between Houston and Brownsville, Texas. The segment of the Angleton Subdivision to be used by the proposed BNSF trains extends between Algoa and Placedo, Texas.

At Placedo, the Port Lavaca Branch crosses the Angleton Subdivision at an approximate 90-degree angle. A connecting track between the Angleton Subdivision and the Port Lavaca Branch is located in the northwest quadrant of the crossing tracks. The Angleton Subdivision and Port Lavaca Branch are dispatched by UP, and on the Angleton Subdivision train movements are authorized using a Centralized Traffic Control system.

The proposed new rail line would carry an average of two trains per day, one inbound and one outbound. Each train is expected to consist of approximately 25 to 30 cars. The loaded rail traffic anticipated by BNSF would be predominantly outbound carloads, consisting primarily of plastic pellets. This rail traffic is presently handled by the UP and moves on the UP Seadrift Industrial Lead between UCC and Bloomington, where UP connects to its Angleton Subdivision.

Train movements over the proposed rail line between UCC and the connection with the Port Lavaca Branch at Kamey would be under the jurisdiction of the Restricted Speed operating rule, which limits train speed to 20 mph and requires slower speeds under certain conditions. At Kamey, BNSF train crews would consult with the UP train dispatcher for access to the Port Lavaca Branch. BNSF trains would also operate under Restricted Speed operating rules between Kamey and Placedo.

3.4.2 Transport of Hazardous Materials

SEA reviewed UCC traffic data to determine the level of hazardous material traffic that is anticipated annually. A small proportion of UCC traffic consists of inbound and outbound hazardous materials in tank cars, totaling about 2,500 carloads annually. A portion of this traffic may move on the proposed rail line.

3.4.3 Hazardous Waste Sites

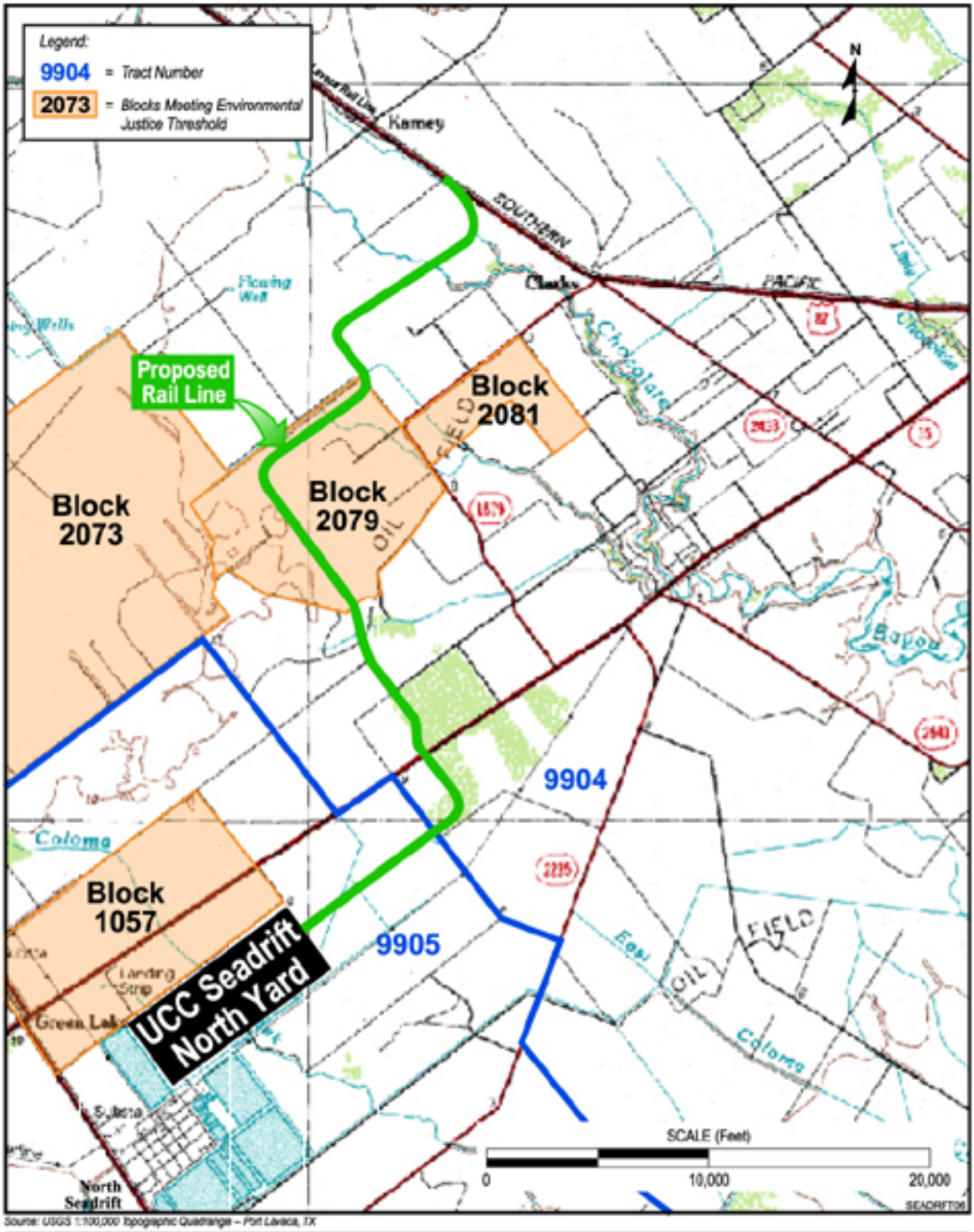
As part of its environmental review, SEA conducted a hazardous materials site assessment report (SAR) on May 9, 2001. The SAR consisted of searches of Federal and state databases for information on hazardous materials activity. The report identified known environmental risk sites within one mile of the project site. The SAR constitutes a concise review of known environmental risk sites associated with the property and the adjacent area. The report meets American Society for Testing and Materials (ASTM) standard E-1527 for research typically conducted for a Phase 1 environmental site assessment. No hazardous materials sites were identified within the project area

One site, consisting of an underground pipeline located approximately one mile from the project, is listed on the EPA Resource Conservation and Recovery Act Information System (RCRIS) Notifiers database as a "formerly regulated site." The best available information from Federal and state databases indicates that the site was at one time listed on a RCRA database as either a generator of hazardous waste or a violator of RCRA requirements.

3.5 WATER RESOURCES

3.5.1 Surface Water

The proposed project is located in the watersheds of the Chocolate Bayou and the Agua Dulce Creek. Waters from these streams, as well as several intermittent tributaries, all drain into



Source: USGS 1:100,000 Topographic Quadrangle – Port Lavaca, TX

Seadrift Rail Build-In
Finance Docket No. 34003

CENSUS TRACTS AND BLOCKS
Figure 3-1

Lavaca Bay and the Gulf of Mexico. Other drainage features include many linear miles of man-made excavated ditches, and channelized natural intermittent channels that discharge into these two waterways at various locations within the project area. Most prominent in the north end of the project are the tributary to the Chocolate Bayou, and the drainage channels referred to as Channel 1 and Channel 2. Another major ditch near the southern project terminus is the East Coloma Channel. Additionally, there are two seasonally flooded depressions adjacent to the proposed rail line. Water quality data for these features is not available, but water quality is thought to be generally degraded as a result of agricultural runoff. Local surface waters are primarily used for recreation and drainage.

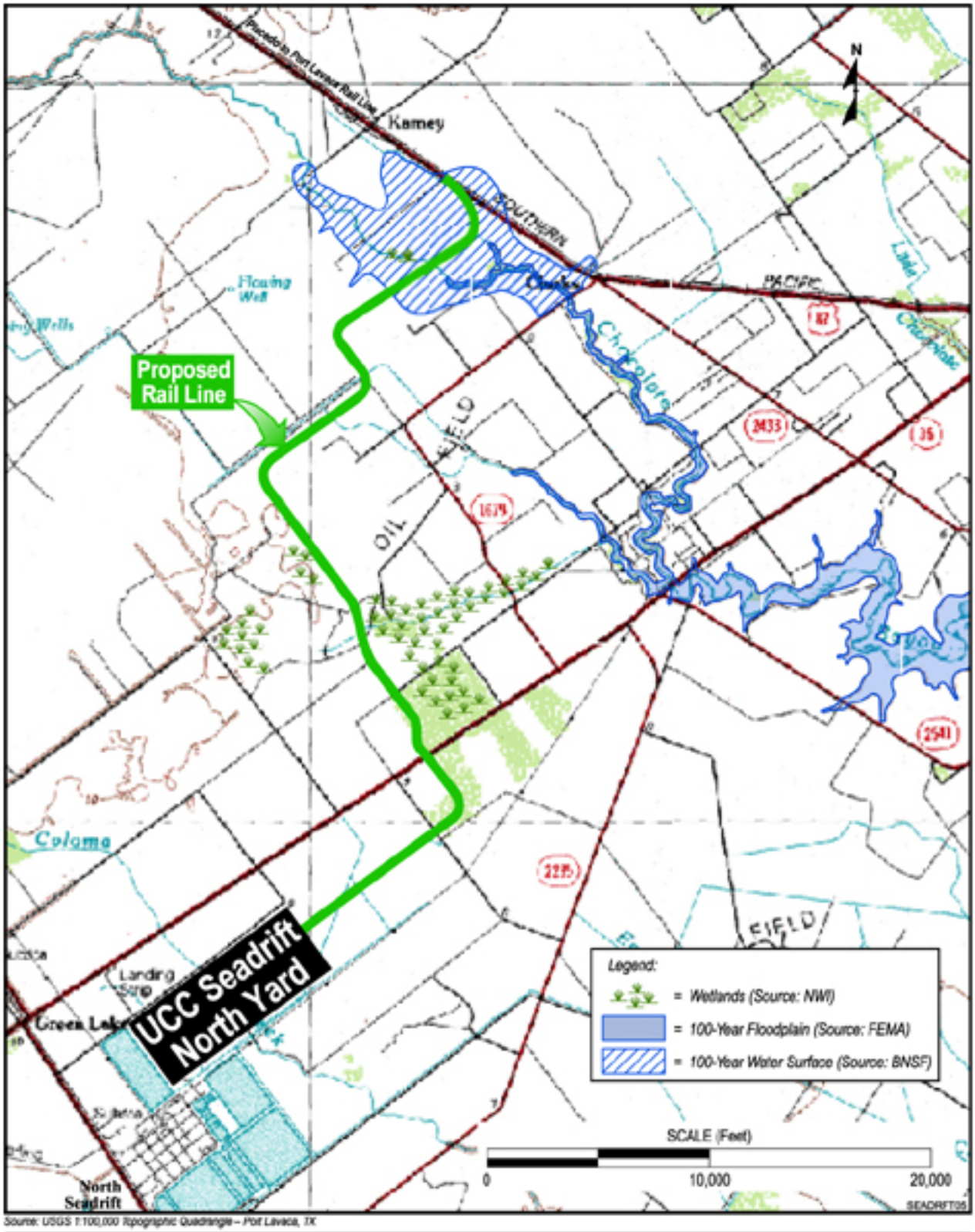
3.5.2 Ground Water

Ground water is the primary source for commercial, industrial and domestic water in the project area. Industry withdraws from the Lissie Aquifer; a high yield system located approximately 100 meters (300 feet) below the surface. Flow of this aquifer is generally southeast, parallel to U. S. Route 87. Unfiltered residential and commercial sources are generally derived from shallow 20 to 40 meter (70 to 120 feet) cased wells sunk into a complex of sand and gravel sediments. Groundwater, especially for domestic use, is of a very good quality, although some wells occasionally have undesirable concentrations of dissolved solids, which adversely affect taste.

3.5.3 Drainage and Floodplains

The proposed project is located in an area of very flat topography, most at or below 30 feet above mean sea level and slightly dissected by small streams and channels. General drainage is from northwest to southeast. At the north end of the project area, the Chocolate Bayou and its eastern tributary, intersect the proposed alignment, while the Agua Dulce Creek and the East Coloma Channel intersect the central and southern segment, respectively. The hydrology of the project area, however, has been significantly altered in past years as a result of canals, drainage ditches, levees, and rechannelization, and the original stream alignments can be somewhat difficult to determine. In some cases, abandoned channels are readily apparent from aerial photographs, indicating the original meanders of these streams. Comparing 1929 aerial photographs, the alignments of the Chocolate Bayou and its eastern tributary do not appear to have been significantly altered over the last 70 years. In contrast, large segments of the Aqua Dulce Creek and the Coloma Creek have been channelized and realigned several times.

To determine the location of the 100-year floodplain within the project area, an electronic search of the ESRI / FEMA flood hazard map database was conducted. As shown in Figure 3-2, the proposed project does not cross any portion of the designated 100-year floodplain. This mapping, however, is not consistent with actual observations made by area residents during recent 100-year event storms.



Source: USGS 1:100,000 Topographic Quadrangle – Port Lavaca, TX

Seadrift Rail Build-In

Finance Docket No. 34003

WATER RESOURCES

Figure 3-2

Three separate letters were filed by landowners[1], which discussed in detail the drainage problems that have existed in the project area for many years and sought assurance that the proposed rail line would not exacerbate existing drainage conditions. The landowners' letters note that the area in and around Kamey has historically experienced flooding and drainage problems, and roadway travel during heavy rains has been difficult. Federal, state and local authorities have long been aware of these issues and have studied various proposals over the years to improve drainage conditions. However, according to BNSF, the cost/benefit analysis of the studied improvements led to the conclusion that either such improvements were not economically justified or that funding for such projects were not available.

Specifically, in 1983, the U.S. Department of Agriculture studied two drainage improvements that would have diverted water from the affected area. One improvement, which would be upstream from the proposed rail line, was to construct a new drainage ditch near the Victoria/Calhoun county line in order to divert a portion of the water to Lavaca Bay. This project was estimated to cost $1.9 million. The other improvement, which would be downstream from the proposed rail line, was to construct a bypass channel to divert floodwaters from Big Chocolate Creek away from the Matson Subdivision at State Highway 35. This project was estimated to cost $1.1 million. Additionally, in 1991, the U.S. Army Corps of Engineers concluded that other possible drainage improvements would yield a cost/benefit ratio of 0.1, which was insufficient to justify an annual commitment of resources.

During the planning of the proposed rail line, BNSF recognized the local drainage issues and consulted with local interests. In particular, BNSF consulted with the chairmen of the local drainage districts affected by the line and the Calhoun County judge regarding the proposed alignment and drainage issues. In addition, UCC conducted meetings with local groups through its UCC Advisory Panel and Near Neighbor Group for the specific purpose of discussing the project and its affect on local drainage. BNSF also consulted with government agencies, including the Army Corps of Engineers, U.S. Fish and Wildlife Service, Texas General Land Office, and the Texas Parks and Wildlife Department. Close coordination has been conducted with the Texas Department of Transportation (TxDOT) for the planned grade separations at U.S. Highway 87 and State Highway 35. TxDOT plans to elevate a portion of U.S. 87 to alleviate concerns about local flooding.

To ensure that the proposed rail line did not exacerbate local drainage problems, BNSF conducted detailed drainage studies as part of the planning and design of the project. The results of these studies were used to better define drainage characteristics of the area and to

[1] Letter of Melvin and Theresa Clanton to Linda J. Morgan dated March 17, 2001; Letter of Virgil R. Pulliarn to the Surface Transportation Board dated March 26, 2001; Letter of Edwin A. Wagner to the Surface Transportation Board dated March 30, 2001.

specify the proper size of all drainage structures (e.g., bridges and culverts).

As part of the detailed drainage study, the peak 100-year discharge was calculated by using two different analytical methods: Regional Regression and the Rational Method. The Regional Regression method is a series of equations, which use historical hydrological data to determine
the peak discharge for un-gauged areas. The Rational Method is a peak discharge method that uses basin characteristics with rainfall intensity to determine peak discharge. These methods were used to calculate the peak 100-year discharge and the results were comparable to the type of flooding that local residents have described. As shown in Figure 3-2, the area of 100-year water surface as predicted by these studies is more extensive than that shown by the FEMA maps. These results also compare to drainage improvement reports published by local drainage districts. Finally, the predicted area compares very closely to flooded areas shown in aerial photographs taken during the floods of 1991 -- providing additional confirmation of the predicted discharges. A complete copy of the drainage study is included as Appendix A.

3.5.4 Wetlands

Wetlands habitats are seasonally or periodically flooded or saturated, develop hydric soils with little or no oxygen, and support vegetation that tolerates these conditions. Wetlands are valuable natural resources because they recharge ground water and retain floodwaters, remove sediment and pollutants from streams, and protect stream banks from erosion. Agriculture has converted most of the original wetlands in the project area to cropland. The remaining wetlands occupy channels of streams and bayous, excavated ditches, and occasional isolated depressions.

The Soil Survey of Calhoun County, National Wetland Inventory (NWI) maps, and 1-meter digital aerial photography (1997) were used to identify potential wetlands in the project area. Based on the review of the aerial photography and maps, six potential wetlands along the proposed route were field checked by Certified Wetland Biologists. The surveys were conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (1987).

Delineation data forms were completed for all potential wetland sites and adjacent uplands. The boundaries of the wetlands along the proposed rail line are shown on Figure 3-2. A Delineation Report documenting the results of the wetland surveys was submitted on March 28, 2001 to the U.S. Army Corps of Engineers, Corpus Christi. A copy is included as Appendix B.

3.6 BIOLOGICAL RESOURCES

SEA identified the biological resources that were present or reasonably expected within the project corridor. SEA also investigated whether there were any parklands, forest preserves,

refuges, or wildlife sanctuaries in the vicinity of the proposed construction.

SEA consulted several data sources to identify existing biological resources, including USGS 7.5-minute topographic maps, the NRCS *Soil Survey of Calhoun County, Texas*, *Groundwater*

Resources of Victoria and Calhoun Counties, Texas, *The Vegetation Types of Texas Including Cropland*, and U. S. Fish and Wildlife Service lists of sensitive or threatened and endangered species. Each site was also visited by SEA's third-party consultant to evaluate habitats, to identify the presence or potential occurrence of sensitive species, and to verify published data. Federal and state resource management agencies were consulted concerning the potential occurrences of sensitive plants and animals.

Major land utilization within the project corridor is limited to agriculture, range land, oil fields, minor water bodies and disturbed riparian corridors, linear transportation features, and ranches and residences. The study area is transected by two major highways, US 87 and State Highway 35, and numerous other farm-to-market (FM) and secondary roads. There are oil fields established east of Green Lake, and also southwest of Clarks.

The project corridor lies in the Gulf Coastal Plain province, and more specifically within the Gulf Prairies and Marshes eco-region. Existing habitats are generally composed of flat fields, pastures, and range land. Where not in active cultivation, and where over-grazed or otherwise neglected, unmanaged land is overgrown with woody brush, weeds and brambles. These scrub habitats are commonly found along fence rows, in heavily disturbed or abandoned fields, and around old buildings, waysides, roadsides and other unmanaged places.

3.6.1 Climate

The climate of the project area is humid subtropical, with mild winters and warm summers. Prevailing constant southeasterly winds from the Gulf of Mexico and associated bay systems help regulate the temperature, and severe extremes are uncommon. Tropical storms affecting the Gulf Coast occur in summer and fall, but severe, damaging storms are rare. Winters are cool, cloudy, and rainy. Springs days are mild and often windy, with occasional thundershowers or storms. Summers are dry and hot, with approximately 112 days annually above 90 F. degrees. Thunderstorms produce excessive rainfall amounts at times, and occur on approximately 50 days annually, with most in May. The average daily temperatures in winter and summer are 45 and 86 degrees Fahrenheit, respectively. The average precipitation in Calhoun County is 38.56 inches, with peak rainfall periods between September-October and April-June. March is the driest month. Measurable snowfall is rare, with maximum-recorded amounts totaling only approximately 5 inches (12.7 cm).

3.6.2 Soils

Soil mapping units in Calhoun County are currently being revised as part of the Major Land Resource Area (MLRA) 150-A Coastal Plains mapping effort. Consequently, several of the previously mapped soil series within the published *Soil Survey of Calhoun County, Texas* are now considered soil complexes, or have been taxonomically included as synonymous with other series, and renamed (J. Douglass, NRCS-Victoria Office, personal communication).

Within the project area there are three modern soil mapping units: Lake Charles clay (La), Dacosta-Contee complex (Dc), and Telferner very fine sandy loam (Te). Within the Telferner series there is a hydric soil inclusion known as Cieno sandy clay loam, which occurs within depression ponds in the project area. Additionally, areas formerly individually mapped as Midland clay loam (Mc), Midland-Dacosta complex (Md) and the Dacosta clay loam (Do) are now mapped collectively within the Dacosta-Contee complex.

3.6.3 Vegetation

The project area lies within a region historically vegetated by a coastal prairie habitat known as bluestem grassland. Relatively large acreage of this habitat was observed in Natural Resources Conservation Service aerial photography of the region produced in the mid-1950s. Small remnants of this sensitive habitat are located within Calhoun County, but not within the project corridor. Associated with this landscape are microtopographic features known as gilgai features. Heavily disturbed (grazed) relict gilgai depressions were found within the project corridor, indicating past vegetation history of the area. No undisturbed native prairie or coastal woodlands habitats were identified within the corridor.

The dominant existing vegetation type in the project area is cultivated agricultural land. The most common row crops include sorghum, cotton, and corn. Along the proposed alignment, managed pasture habitats, which have almost entirely displaced once-extensive native coastal prairie grassland, include a mixture of native and introduced grasses, cropland weeds, some wildflowers, and larger stands of pioneer and undesirable invasive species. Commonly observed grasses include common Bermuda (*Cynodon dactylon*), paspalums (*Paspalum* spp.), ryegrass (*Lolium perenne*), and bluestems (*Andropogon* spp.) Other observed species in the pasture habitats include spikerush (*Eleocharis* montividensis), dewberry (*Rubus trivialis*), mesquite (*Prosopis glandulosa*) and huisache (*Acacia smallii*). The majority of the open pasture habitat has been disked, plowed, or altered by drainage improvement efforts since the 1950s. The sparsely wooded and scrub habitats have developed from abandoned or overgrazed agricultural areas. These unmanaged areas are typically colonized by species well adapted to disturbance regimes. Observed species include sugar hackberry (*Celtis laevigata*), huisache, mesquite, Macartney rose (*Rosa bracteata*), Chinese tallow (*Sapium sebiferum*), and Osage orange (*Maclura pomifera*).

A comprehensive listing of vegetation observed in the project area is included in Appendix C.

3.6.4 Wildlife

In addition to documentation recorded during field reconnaissance, published wildlife information including *Unique Wildlife Ecosystems of Texas* and *The Vegetation Types of Texas, Including Cropland* were reviewed to determine whether significant wildlife habitat was documented within the project area. According to these resources, no important wildlife habitat is known in the project area. This is likely due to a lack of stable, higher-quality habitats required for the life history needs of most wildlife. Human disturbance has reduced or eliminated the variety of habitats, and has impacted remaining populations numbers as well. Natural remnant plant communities still persist in widely scattered locales within the project area, and wildlife is primarily confined to these fragmented corridors. However, even with limited terrestrial and aquatic/riparian habitat, numerous species of small mammals, birds, reptiles, and amphibians were observed during field investigations. These observed species, as well as species expected within the project area, are listed in Appendix C.

3.6.5 Threatened and Endangered Species

Consultation with the Federal and State natural resource management agencies, U. S. Fish and Wildlife Service (USFWS), and the Texas Parks and Wildlife Department (TPW) Natural Heritage Program was initiated to determine whether known occurrences of threatened and endangered species has been documented within the project area.

Federally-Listed Species. According to the USFWS Threatened and Endangered Species System (TESS) web page database (and updated by USFWS consultation letter of July 31, 2001), there are no known occurrences of threatened or endangered species or their critical habitat in the project area within Calhoun County. Additionally, no listed threatened or endangered species or their suitable habitat was observed during field investigations. The loggerhead shrike, a Federal candidate threatened species (formerly Category 2), was observed along a fence row southeast of the project corridor along US Route 87 near Port Lavaca. This bird is probably more common than documented in the project vicinity, where abundant open land exists.

State-Listed Species. The TPW Natural Heritage Program maintains computerized records of state-listed threatened and endangered species by county subject to jurisdiction under Chapters 67-68 (Title 31), Texas Administrative Code, and Section 65 of the Parks and Wildlife Code. The TPW reports there are no known occurrences of state-listed threatened or endangered species in the project area.

Table 3-3 presents the threatened and endangered species tracked by the USFWS and TPW for Calhoun County.

Many of the species listed in the table occur in estuarine environments that do not exist in the project area, or are occasional migrants that make sporadic use of the project area. For other species, there is no suitable habitat within the project area. Based upon review of Table 3-3, it is very unlikely there are any Federal- or state-listed threatened or endangered

species present in the project corridor.

3.6.6 Parks, Forest Preserves, Refuges, and Sanctuaries

No national or state forests or parks are located within a mile of the proposed site. The Guadalupe Delta Wildlife Management Area is located more than five miles northwest of the project corridor and is the nearest special resource area. The Aransas National Wildlife Refuge is located 19 miles from the proposed rail line.

Table 3-3
THREATENED AND ENDANGERED SPECIES, CALHOUN COUNTY, TEXAS

Common Name	Scientific Name	Listing Status	Habitat Occurrence
Hawksbill Sea Turtle	*Eretmochelys imbricata*	FE	No Estuarine Habitat
Kemp's Ridley Sea Turtle	*Lepidochelys kempii*	FE	No Estuarine Habitat
Leatherback Sea Turtle	*Dermochelys coriacea*	FE	No Estuarine Habitat
Green Sea Turtle	*Chelonia mydas*	FT	No Estuarine Habitat
Loggerhead Sea Turtle	*Caretta caretta*	FT	No Estuarine Habitat
Texas Horned Lizard	*Phrynosoma cornutum*	FC, ST	No Suitable Habitat
Bald Eagle	*Haliaeetus leucocephalus*	PD	Potential Migrant; No Nesting Habitat
Piping Plover	*Charadrius melodus*	FT	Potential Migrant; No Nesting Habitat
Whooping Crane	*Grus americana*	FE	Potential Migrant; No Nesting Habitat
Brown Pelican	*Pelecanus occidentalis*	FE	Potential Migrant
Cerulean Warbler	*Dendroica cerulea*	FC	No Suitable Habitat
White-faced Ibis	*Plegadis chihi*	FC	No Suitable Habitat
Gulf Salt Marsh Snake	*Nerodia clarkii*	FC	No Suitable Habitat
Ferruginous Hawk	*Buteo regalis*	FC	Potential Migrant; No Nests Observed
Loggerhead Shrike	*Lanius ludovicianus*	FC	Observed Near Port Lavaca
Reddish Egret	*Egretta rufescens*	FC, ST	No Suitable Habitat
Black-spotted Newt	*Notophthalmus meridionalis*	SE	Potential Breeding Habitat
Timber Rattlesnake	*Crotalus horridus*	ST	No Suitable Habitat
Wood Stork	*Mycteria americana*	ST	No Suitable Habitat
Eskimo Curlew	*Numenius borealis*	SE	No Suitable Habitat
Interior Least Tern	*Sterna athalossus*	SE	No Suitable Habitat

Source: USFWS web page at www.fws.us.gov/. and USPWS letter (7/31/01)
Listing Status Abbreviations: FE, Federal Endangered; FT, Federal Threatened; PT, Proposed Federal Threatened, PD, Proposed Delisted from Threatened; FC, Federal Candidate (Category 1 or 2); SE, State Endangered, ST, State Threatened.

3.7 AIR QUALITY

Calhoun County is currently categorized as being in attainment with the National Ambient Air Quality Standards. Current sources of emissions in the project area include automobiles, locomotives, industrial operations, and dust from farm fields.

3.8 NOISE

Noise levels in the rural project area are low and sensitive noise receptors are limited to the few residences located along the proposed route. Predominant noise sources in the area are attributed to automobile traffic on adjacent roadways (US 87 and State Highway 35).

3.9 CULTURAL RESOURCES

A cultural resources survey was conducted to assure compliance with Section 106 of the National Historic Preservation Act of 1966 and to provide information for this Environmental Assessment as required by NEPA. The investigations were undertaken to locate cultural resources within the designated survey and reconnaissance areas, to assess the significance of those resources in regard to their potential for inclusion in the National Register of Historic Places, and to make recommendations for the treatment of those resources based on their National Register assessments. Because the proposed rail line is not located on land under the jurisdiction of the State of Texas or its political sub-entities, no State Antiquities Permit is required.

A search of existing site records at the Texas Archeological Research Library (TARL) revealed that no archeological sites are recorded within the proposed project corridor. Several sites, however, are recorded approximately 5 km west of the project area on the banks of Green Lake, and between 5 and 10 km to the north along Lavaca Bay. A historical marker noting the location of the graves of Dr. Moses Johnson (Treasurer for the Republic of Texas) and his wife is located along US 87 near the northern terminus of this project. Field surveys confirmed that the gravesite itself is located approximately 0.25 mile south of the marker and 2000 feet south of the proposed alignment.

On the basis of the literature review and site file research, segments of the proposed rail alignment were assigned a high or low probability for containing archaeological deposits. High-probability areas include those places at or near stream crossings, small topographical rises, and floodplains. All high probability areas were subjected to intensive survey and shovel testing. Low-probability areas were subjected only to intensive pedestrian survey.

One archaeological site (41CL93) was recorded in a cultivated field near the southwest bank of the Chocolate Bayou, as well as two non-site, modern shell scatters and an isolated find in the Aqua Dulce Creek. Site 41CL93 consists of a scatter of historic artifacts (bottle glass,

stoneware, whiteware, window glass, concrete, tile, animal bone) from a farmstead dating to sometime between the 1880s and 1930s. The farmstead was observed on the 1929 aerial photograph of the area, but not on later topographic maps. The two shell scatters are the results of shell being used as road fill and bridge stabilization. The isolated find, a piece of bone and rusted nail, was identified in the cutbank of the creek channel.

Standing structures within the project area are limited to two groups of relatively modern (i.e., less than 50 years old) wooden structures located near the proposed grade separation with State Highway 35. The first, located approximately 150 feet south of State Highway 35, contains a scatter of debris and seven dilapidated structures, including a garage, a shed, and a corrugated tin building. A second cluster of four structures is located approximately 50 meters north of SH 35 and includes one brick building, a mobile home and two white-framed houses. The houses appear modern and are still occupied. None of the standing structures exhibited any integrity potential sufficient for listing on the National Register of Historic Places. The Texas Historical Commission has concurred with this determination.

3.10 VISUAL AND AESTHETIC CONDITIONS

The visual character of the project area is primarily flat agricultural and range lands interspersed with roadways, oil fields, fences, power lines, houses, and pipelines and power lines. A few small stands of trees border streams and ditches, but otherwise there are no scenic natural resources in the area.

4

POTENTIAL ENVIRONMENTAL IMPACTS

This chapter provides an overview of the potential environmental impacts from the proposed construction and operation of a new rail line connection at Seadrift. In conducting its analysis, SEA considered the following environmental impact areas in accordance with the Surface Transportation Board's environmental rules at 49 CFR Part 1105.7(e) and other applicable regulations:

- **Land Use**
- **Socioeconomics and Environmental Justice**
- **Transportation and Safety**
- **Water Resources**
- **Biological Resources**
- **Air Quality**
- **Noise**
- **Cultural Resources**
- **Visual and Aesthetics**
- **Energy**
- **Construction Impacts**
- **Secondary and Cumulative Impacts**

4.1 POTENTIAL ENVIRONMENTAL IMPACTS FROM THE PROPOSED ACTION

4.1.1 Land Use

The potential for local land use impacts from the construction and operation of a rail line generally arises from the acquisition of land for the ROW and associated uses, as well as effects on property adjacent to the ROW due to such things as restriction of access. More regional effects could arise if the proposed project were to change the area's current development trends or alter local land use policies.

Assessment Methods and Evaluation Criteria

To assess land use effects, SEA consulted with local planning officials to establish whether the construction and operation of the proposed rail line was consistent with existing land uses and future land use plans. Determination as to whether the proposed rail line would affect any prime agricultural land was based on SEA's consultations with the Natural Resources Conservation Service (NRCS). SEA conducted similar consultations with the State Coastal Zone Management Agency to assess whether the proposed project would affect protected coastal resources. SEA also contacted the Bureau of Indian Affairs to obtain information on any Federally recognized American Indian tribes or reservations within the project area.

SEA considered land use effects to be adverse if any construction activities or subsequent operations would cause long-term changes that:

- Conflict with existing land uses in the area or future land use plans.
- Displace prime farmland from use for agricultural production.
- Conflict with an existing Coastal Zone Management Plan.
- Affect any Indian Reservation or tribal lands.

Potential Effects

Land Use. The proposed project would traverse land currently in use as primarily agricultural land consisting of active cropland, fallow fields, and range landland for grazing. The 90-foot-wide right-of-way for the new rail line would require the conversion of approximately 84 acres of these lands. This includes 49.1 acres of cropland, 25.1 acres of fallow field or range landland, 8.7 acres of wooded areas, and 1.0 acre of publicly owned right-of-way and roadways.[1]

This taking would remove a small amount of land out of potential agricultural production from nine farm parcels, and should not result in significant land use impacts.

Prime Farmlands. The proposed rail line would convert 49.1 acres of potential farmland from agricultural use to transportation use. All of the lost farmland is classified by NRCS (based on soil types) as prime and unique farmland.

By following existing property lines, construction and operation of the existing rail line should have minimal effects on farming operations. No farmlands would be bisected and all existing access would be maintained with at-grade crossings.

[1] These amounts do not include the additional lands required to build the grade-separated highway structures proposed for US 87 and State Highway 35.

Coastal Zone. The proposed project is located within the Port Lavaca Area of the Texas Coastal Zone Management Area. The construction and operation of the proposed rail line would not affect resources associated with coastal ecosystems, including estuaries and tidal wetlands, coastal vegetation, fisheries, or coastal wildlife.

Evaluation of the proposed project to ensure compliance with the Coastal Zone Management Plan is being coordinated as part of the Section 404 permitting process. The General Land Office of Texas may provide comments and will make a consistency determination during the Section 404 permitting process.

American Indian Reservations. There are no American Indian reservations or tribal lands located in or near the project area.

4.1.2 Socioeconomics

Assessment Methods and Evaluation Criteria

SEA analyzed the social and economic effects of the proposed rail line on communities adjoining the right-of-way. SEA considered effects to be adverse if construction or operation of the proposed rail line caused displacement of a significant number of local residents; disrupted or severed community interactions and public services; or created negative effects to the local or regional economy.

Potential Effects

Displacements. No residential or commercial displacements would be caused by the proposed project.

Community Service Impacts. No impacts to community services are anticipated because of the proposed project. There would be no takings of community facilities, no interruption of services provided by these facilities, and no impacts to patterns of community interaction.

Economic Impacts. Short-term beneficial impacts to the local economy would result due to the creation of jobs associated with construction. This positive impact is expected to be experienced directly by workers involved in the construction of the rail line and indirectly by nearby businesses that these workers would patronize. No long-term negative impacts to the local or regional economy are anticipated.

The proposed project would result in the acquisition of 49.1 acres of farmland used for crop production. As noted in Section 4.1.1, these acquisitions should result in minimal, if any, impacts to individual farming operations.

4.1.3 Environmental Justice

Assessment Methods and Evaluation Criteria

SEA analyzed the effects of the proposed rail line on low-income and minority populations in accordance with the procedures outlined in Executive Order 12898: "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations." SEA conducted an environmental justice analysis to: (1) determine the presence or absence of Environmental Justice Communities of Concern surrounding the proposed rail line; and (2) if such a community is present, determine the presence or absence of disproportionately high and adverse human health or environmental effects on the citizens of that community. As part of this analysis, SEA reviewed the demographic and income data from the 1990 and 2000 Censuses to compare the population of the area with the proposed project with that of Calhoun County. SEA used the following criteria as established by the U.S. Environmental Protection Agency for identifying these Communities of Concern:

- At least one-half of the census block being analyzed is minority status, or
- At least one-half of the census block being analyzed is low-income status, or
- The percentage minority of the census block being analyzed is more than 10 percentage points higher that the percent minority for the entire county in which the block is located, or
- The percentage low-income status of the census block being analyzed is more than 10 percent higher than the percentage of low-income for the entire county in which the block is located.

An adverse environmental justice effect would occur if any significant adverse effect of the proposed construction or operation were to fall disproportionately on low-income or minority populations.

Potential Effects

Although the President's directive on Environmental Justice in Executive Order 12898 of 1994 technically does not apply to independent agencies like the Board, SEA has evaluated the potential significant impacts to determine if they could result in disproportionately high or adverse impacts on minority or low income communities. SEA reviewed demographic information in the vicinity of all construction-related activities that would meet or exceed the Board's thresholds for environmental analysis. SEA has concluded that there are four census block areas (numbers 2073, 2079, 2081 and 1057) that contain minority populations that meet the Environmental Justice threshold for this project. The proposed project would not have a disproportionately high or adverse human health or environmental impact on the citizens within these blocks. These minor land acquisitions associated with the proposed project would not result in disruption of community interaction or the local economy on which these communities depend.

4.1.4 Transportation and Safety

Assessment Methods and Evaluation Criteria

SEA examined the existing local and regional rail systems that could be affected by the proposed rail line construction. SEA also evaluated potential effects on local and regional roadways. In evaluating potential safety effects, SEA assessed: (1) the need for new grade crossings, (2) the effect of the proposed line on the transportation of hazardous materials, (3) the likelihood of encountering hazardous waste sites during construction, and (4) the likelihood of a hazardous material release during construction.

Significant effects would occur if the construction or operation of the proposed rail line would cause long-term disruptions to vehicular traffic, increase the potential for accidents at grade crossings, increase the volume of hazardous materials car loads being transported to a level greater than 10,000 car loads per year (key route),[2] or cause spills or release of hazardous materials during construction.

Potential Effects

Transportation Systems. The construction of the proposed rail line would permit BNSF to access the UCC complex that is presently served exclusively by Union Pacific (UP). According to BNSF the availability of an alternative rail line to the UCC complex is expected to provide more-efficient service through competitive, single-line service.

BNSF does not expect traffic to be diverted to or from other transportation modes onto the proposed line. As a result, no impact on the regional highway network is anticipated.

Impacts to vehicular traffic on local roadways are anticipated to be minimal as well. As noted previously, the proposed new rail line would handle an average of two trains per day, one inbound and one outbound, and each train would consist of approximately 25-30 cars. Train speeds would be limited to 20 mph under the Restricted Speed operating rule. To avoid disruption to the two major highways intersected by the proposed rail line, the Texas Department of Transportation (TxDOT) would require that BNSF build grade separations at US Highway 87 and State Highway 35. At each location, the highway would be carried over the railroad on a new overpass, thereby preventing delays to rail and vehicular traffic if the

[2] To determine whether a potential change in hazardous material transport would be significant and warrant mitigation, SEA evaluated the traffic levels to determine whether the line segment following any increase in traffic would meet the criteria as a "key route". Key trains are trains that handle 20 car loads a year.

proposed construction and operation is approved by the Board. In addition, TxDOT would require the grade separation of US Highway 87 to accommodate the planned expansion of the highway from two to four lanes. The proposed rail line would also intersect six other local roads -- two paved public roads and four private access roads. The public grade crossings would have active warning devices.[3]

Delay to vehicular traffic at these six locations would be minimal. The maximum average delay for vehicles should be approximately 1-1/2 minutes for each train passby -- a total delay of 3 minutes over an average 24-hour period.

Local emergency services on major roadways should not be disrupted by the operation of the proposed rail line. The two major routes intersected by the rail line (US 87 and State Highway 35) would be grade-separated. The roadways would be carried over the rail line on new overpass structures thus avoiding any potential delay. Similarly, the grade-separated structure at US 87 would ensure no impact to the local evacuation route. Some delays could be experienced at the two public grade crossings. However, as noted above, such delays would be less than 1 ½ minutes and only occur twice per day.

It is not anticipated that trains operating on the proposed rail line would block access roads to the UCC complex. By accessing the UCC's North Yard, the proposed rail line would also reduce the number of blocked grade crossing delays which occur at the plant's southern entrances on Highway 185 that are presently associated with UP access to the UCC facility.

SEA reviewed the BNSF Operating Plan. The Operating Plan contained no unusual or special railroad operating procedures and conformed to the customary practices of the railroad industry.

Transport of Hazardous Materials. The construction of the proposed rail line would not affect the safe transport of hazardous materials. UCC rail traffic includes both inbound and outbound tank cars of hazardous materials. These materials include ethylene glycol and ethylene glycol monobutyl ether. Approximately 2,500 carloads of these materials are moved by rail each year. Some of this traffic would move on the proposed rail line, depending on either its origin or destination, among other commercial factors. However, these hazardous materials would constitute only a small proportion of the carloads handled by BNSF on the proposed line.

[3] Active warning devices are flashing lights (a set of alternately flashing red lights) and a ringing bell and gates (used in addition to the lights and bells). The daily number of trains and average roadway delay per train are considered when determining the type of warning device to be used.

All hazardous materials would be transported in compliance with both U.S. Department of Transportation Hazardous Materials Regulations[4], BNSF Instructions for Handling Hazardous Materials, and Emergency Response Plans.[5] Hazardous materials would be moved only when

[4] 49 CFR Parts 171 to 180

[5] BNSF is a participant in the American Chemical Council's Responsible Care Program, a railroad industry initiative to improve responsible handling of chemicals. The AAR and Chemical Manufacturers Association establish standards to manage the risk of hazardous materials that the railroad industry follow.

the train crew has both proper shipping papers, including proper identifying placards on the railcars, and emergency response information. Based on the limited number of cars carrying hazardous materials, the proposed rail line would not constitute a Key Route[6] and therefore, would not be subject to the procedures of the Inter-Industry Task Force.

Similarly, the Surface Transportation Board's threshold for evaluation of potential adverse or significant environmental impact is 10,000 carloads per year. UCC's annual volume of hazardous material movements is about 2,500 carloads, and BNSF is expected to handle only a small amount of that volume. Thus, the potential for significant environmental impact associated with the movement of hazardous materials is minor. It should be noted that the track design speed for the proposed line is 25 mph while the operating speed would be limited to 20 mph.

Hazardous Waste Sites. No hazardous waste sites would be affected by the proposed project.

4.1.5 Water Resources

Assessment Methods and Evaluation Criteria

SEA assessed whether the following potential effects to water resources could result from construction and operation of the proposed rail line:

- Alteration of creek embankments as a result of stabilization measures;
- Temporary or permanent loss of surface water area associated with the incidental deposition the incidental deposition of fill;
- Downstream sediment deposition or water turbidity due to fill activities, dredging, and/or soil erosion from upland construction site areas;
- Direct or indirect destruction and/or degradation of aquatic, wetland, and riparian vegetation/habitat;
- Degradation of water quality through sediment loading or chemical/petroleum spills; and
- Alteration of water flow that could increase bank erosion or flooding, uproot or destroy vegetation, or affect fish and wildlife habitats.

Effects to the water resources are considered adverse if there is substantial interference with drainage, adverse discharges (such as sediment or pollutants), or loss of wetlands or floodplains resulting from the construction or operation of the proposed rail line. Adverse effects are generally known to result from improper use of agricultural soil amendments that

[6] As defined by the Association of American Railroads (AAR), a key route is a track that carries an annual volume of 10,000 car loads or intermodal tank loads of any hazardous material. AAR has developed voluntary industry key route maintenance and equipment guidelines designed to address safety concerns in the rail transport of hazardous materials.

in turn

discharge as runoff, but environmental degradation of water quality, if any, is likely to be of only very localized and short-term significance in specific areas that may not be properly managed or maintained by current landowners.

Potential Effects

Surface Waters. The proposed rail line would cross three natural stream channels: the Chocolate Bayou an intermittent tributary to the Chocolate Bayou and the Agua Dulce Creek, which has been channelized to carry runoff from agricultural lands (see Figure 2-3). Additionally, the alignment would cross five man-made upland drainage ditches that were excavated between the 1950s and early 1970s. Drainage channels 1, 2, and 3 discharge into the Agua Dulce Creek. Channel 4 is composed of two small swales that follow an old roadbed and discharge into Channel 3. The fifth man-made upland channel originally discharged into the West Coloma Creek and was rerouted to discharge into the East Coloma Creek during the 1970s. In addition, the grade-separated crossing at US 87 would require the relocation and filling of two man-made drainage channels (Kamey and US 87 channels) due to additional right-of-way requirements to construct the highway overpass over the proposed rail line (see Figure 2-3). Each of the three natural channels would be bridged in order to minimize the disruption to the bed and bank of the channel and to minimize the impact on stream banks, vegetation, and fish and wildlife habitats. Impacts to streams and channels would be stabilized and revegetated to minimize erosion and to protect water quality.

The widths and jurisdictional status of each waterway affected by the proposed project are presented in Table 4-1.

Construction of the proposed rail line would not have any adverse effect on area waterways. The existing flow of the natural as well as man-made channels would be maintained. The larger natural stream channels would be bridged. A new 309-foot bridge would be constructed over the Chocolate Bayou. Four pairs of 4' x 4' box culverts would be constructed within 1,000 feet of each side of the Chocolate Bayou bridge to equalize the water surface. Bridges over the tributary to the Chocolate Bayou, the Agua Dulce Creek, and the East Coloma Creek would consist of multiple concrete span structures. The remaining channels, which carry smaller volumes of water, would be crossed using a single or double span slab bridge(s). The proper sizing of crossings and culverts would avoid alteration of water flows or adversely affecting drainage of the adjoining property.

As noted above, a portion of the Kamey Channel would be filled and relocated in order to widen US Highway 87 to the west at the proposed grade-separated crossing. The existing stream channel has been heavily impacted by past drainage improvements and channelization efforts. BNSF is currently coordinating with the U.S. Army Corps of Engineers to determine permitting requirements. However, due to the degraded state of the stream, no

adverse effects are anticipated.

Table 4-1
SURFACE WATER FEATURES AND WETLANDS

Feature	Type	Channel Width (ft)*	Area in ROW (ft^2)	Station	Jurisdictional Wetland
US 87 Drainage	Man-made channel	20	-	5+50	No
Kamey Drainage Channel	Man-made channel	6	-	11+50	No
Tributary to Chocolate Bayou	Natural stream/Intermittent	3	-	16+50	Yes
Chocolate Bayou	Natural stream/Intermittent	5	-	52+00	Yes
Wetland Site #1, Agricultural channel	Man-made channel	-	870	53+50	Yes
Drainage Channel 1	Man-made channel	15	-	123+50	No
Agua Dulce Creek	Channelized natural strea/intermittent	20	-	146+00	Yes
Wetland Site #2	Cieno depressional isolated wetland	-	None	211+00	Yes
Drainage Channel 2	Man-made channel	6	-	224+00	No
Wetland Site #6	Cieno depressional isolated wetland	-	400	229+00	Yes
Drainage Channel 3	Man-made channel	6	-	275+00	No
Drainage Channel 4, 2 borrow ditches	Man-made channel	4,4	-	278+00	No
East Coloma Channel	Man-made channel	8	-	399+00	No

*Channel width is measured at the ordinary high water mark

Ground Water. The proposed rail line would not be located in an aquifer recharge zone. Impermeable clay layers in the soil protect drinking water aquifers in the area from pollution on the ground. Therefore, the project would not adversely affect ground water quantity.

Floodplains and Drainage. The proposed rail line would cross the upper headwaters of area waterways within the flood hazard area designated by the Federal Emergency Management Agency and the 100-year surface water area of the Chocolate Bayou (per hydrologic analysis

conducted for this project). Detailed hydraulic analyses resulted in approximately 40 drainage structures being incorporated into the proposed design of the rail line. All bridges and culverts would be constructed to accommodate the 100-year-frequency flood to be conveyed without causing significant damage to the rail bed, stream channels, or property. Consistent with the Executive Order 11988 - Floodplain Management, the proposed project would not produce increases of backwater elevations within the 100-year floodplain of one foot or greater.

Potential flooding effects from more common storms would also be minimized by the proposed design of the rail line's drainage components. Based on the hydraulic analyses conducted for the project (see Section 3.1.5 and Appendix A), all bridges and culverts would be designed and engineered in such a way as to blend with the natural terrain and not to exacerbate the existing drainage problems of the lands and roadways in the area.

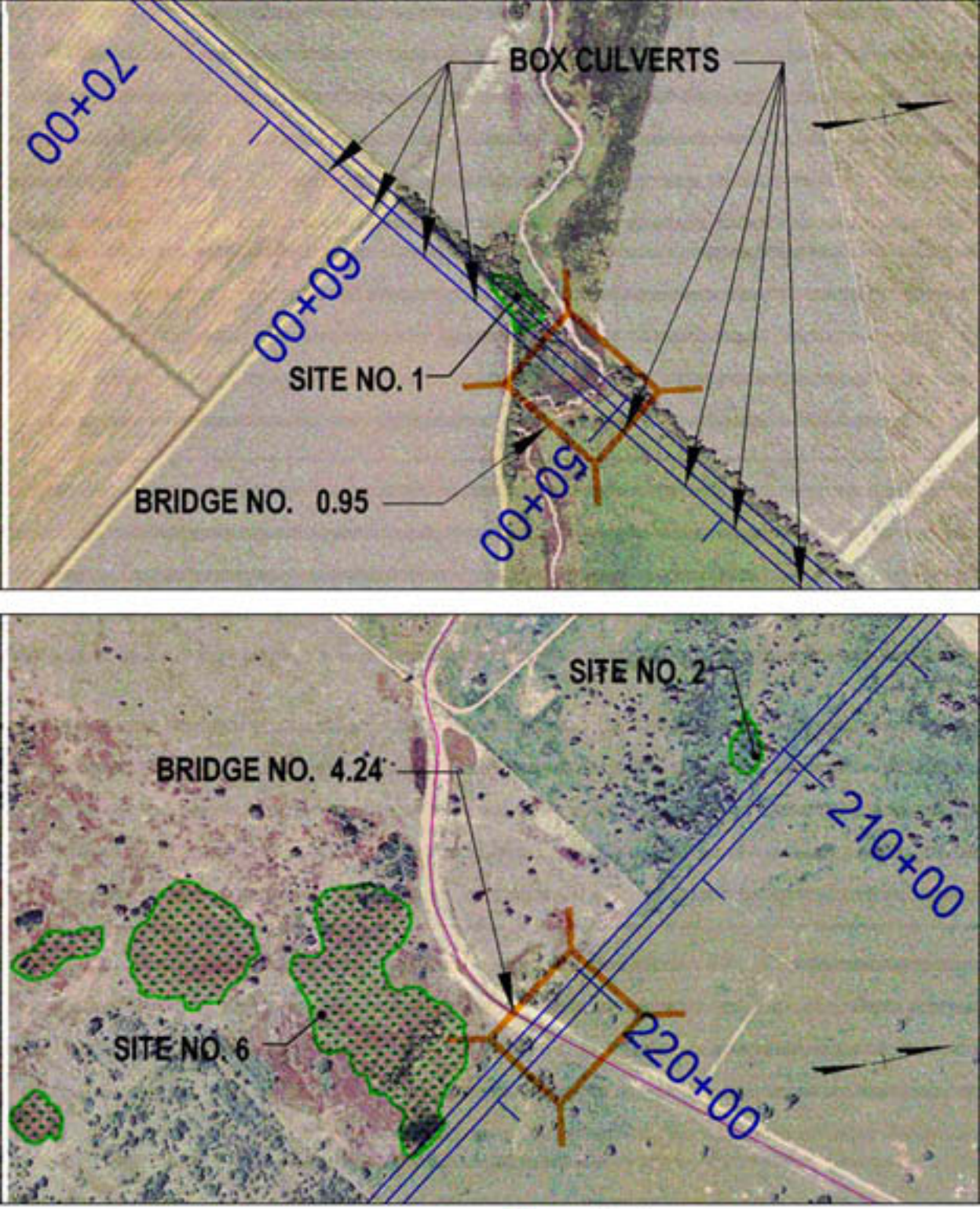
Wetlands. Field surveys identified three wetland sites within or near the proposed rail line right-of-way (see Figure 4-1 and Table 4-1). Site No. 1 is a small linear wetland, which developed in and along a partially filled and abandoned agricultural drainage channel west of the Chocolate Bayou. Based on field evidence, the channel appears to have been blocked during recent channel re-contouring performed following a pipeline project. Approximately 0.02 acre (870 square feet) of this man-made wetland would be within the proposed right-of-way and potentially impacted.

The two other wetlands (Site Nos. 2 and 6) are depressional Cieno soil inclusions within areas mapped as Telferner and Dacosta-Contee soils and are ponded long enough to produce hydric conditions[7] in most years. Site No. 2 (approximately 1 acre) is located outside the proposed right-of-way and would not be impacted. Site No. 6, the largest of the noted wetlands (approximately 7.5 acres), is located partially within the proposed right-of-way. The placement of fill and clearing of vegetation associated with the construction of the rail bed would likely impact approximately 0.01 acre (400 square feet) of the eastern edge of this wetland.

BNSF would seek a permit from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act, as well as any state and/or local permits, before construction begins. As part of the pre-construction notice and permit process, BNSF has submitted a "Delineation of Potential Jurisdictional Waters of the U.S., Including Wetlands" (March 28, 2001) to the US. Army Corps of Engineers. The delineation report was verified by corps representatives during

[7] "Hydric conditions" refer to the soil-water interactions that are manifested as field indicators of supporting wetland hydrology. The presence of long or very long ponding creates reducing (hydric) soil conditions, a necessary component of jurisdictional wetlands.

a site visit to the project area on August 1, 2001 by Mark Patillo, USACE Regulatory Branch, Corpus Christi field office. The delineation report is included as Appendix B.



Seadrift Rail Build-In

Finance Docket No. 34003

0 250 500 1000

WETLAND IMPACTS

Figure 4-1

4.1.6 Biological Resources

Assessment Methods and Evaluation Criteria

SEA assessed whether the following potential effects to biological resources could result from construction and operation of the proposed rail line:

- **Loss or degradation of unique or important vegetative communities;**
- **Harm to or loss of rare, threatened, or endangered plant or animal species;**
- **Loss or degradation of areas designated as critical or important habitat;**
- **Loss or degradation of parks, forest preserves, wildlife sanctuaries or refuges;**
- **Alteration of movement or migration corridors for animals; and**
- **Loss of large numbers of local wildlife or their habitats.**

Effects to biological resources are considered adverse if the proposed construction would result in the loss of important and/or critical vegetation or wildlife habitats, cause harm to threatened or endangered species, or the degradation of parklands, forest preserves, refuges or wildlife sanctuaries.

Potential Effects

Vegetation. The proposed rail right-of-way would displace up to approximately 84 acres of fallow fields, range, pasture and agricultural lands. Impacts to floral communities are not expected to be significant because of the disturbed nature of the landscape and the absence of any critical habitats. The loss of vegetation within the construction area along the tracks would be permanent. The impacts to vegetation in other areas disturbed by the construction would be temporary and it is likely that opportunistic species would invade and reclaim these areas.

Wildlife. The proposed project would convert 84 acres of land to railroad right-of-way, including track bed, access road, and drainage ditches. This total includes 8.7 acres of sparsely wooded lands, 25.1 acres of fallow fields and grasslands, and 49.1 acres of agricultural lands. These areas provide low to fair habitat for wildlife.

Most of the wooded areas are found along the borders of agricultural land and along fence lines. These trees and shrubs provide cover, and nesting and foraging sites for wildlife. The woodlands along the project area are dominated by invasive native and introduced species common in previously disturbed habitats. Construction of the new rail line would remove some of these trees. Trees taken by the proposed project would be replaced gradually through natural regrowth.

The majority of grasslands are used for grazing livestock. Some consist of rarely mowed grassy margins of farm roads, ditches, and fence rows. Most of the agricultural lands consist

of row crops. These areas provide habitat to some species of birds and small animals that tolerate the livestock and agricultural conditions. The proposed rail line, which follows existing property lines, would only traverse the periphery of these grassland systems. Although there would be some minor loss of habitat and cover, the proposed rail line should not be significantly disruptive to wildlife nesting or foraging activities. However, short-term impacts from construction activities within the proposed right-of-way, including noise from construction activities, removal of vegetation from construction easements, and increased human activities, could temporarily displace wildlife from affected areas.

Threatened and Endangered Species. The Federally listed species for Calhoun County, Texas include the brown pelican (*Pelecanus occidentalis)*, bald eagle (*Haliaeetus leucocephalus*), hawksbill sea turtle (*Eretmochelys imbricata*), Kemp's Ridley sea turtle (*Lepidochelys kempii*), leatherback sea turtle (*Dermochelys coriacea*), whooping crane (*Chelonia mydas*), loggerhead sea turtle (*Caretta caretta*), green sea turtle (*Chelonia mydas)* and piping plover (*Charadrius melodus*). Most of these listed species occur in more coastal environments or are migrants that make sporadic use of the area. However, whooping cranes (Endangered) use the Aransas National Wildlife Refuge as winter residence. Because this refuge is 19 miles away from the proposed project, construction or operation of the proposed new line is not anticipated to have any significant impact on the cranes. Bald eagles (Threatened) are common in the area due to a high number of wintering waterfowl that use the wetland habitats along the Gulf of Mexico. However, no potential nesting or roosting habitat was identified during recent site visits. Therefore, the construction and operation of the proposed rail line is not expected to adversely impact the bald eagle.

Parks, Forests Preserves, Refuges, and Sanctuaries. The Guadalupe Delta Wildlife Reserve would not be affected by the construction and operation of the proposed rail line. Its distance from the construction site (approximately 10 miles) effectively shields the facility from any adverse visual or noise effects associated with the construction and operation of the proposed rail line. Similarly, the Aransas National Wildlife Reserve (noted above) is located 19 miles away from the proposed project and should not be affected by the proposed rail line.

4.1.7 Air Quality

Assessment Methods and Criteria

Rail operations can affect air quality through emission of air pollutants from locomotive diesel fuel combustion.

The Board typically applies a threshold level of rail traffic increase for determining whether to quantify the air pollution impacts that would be generated by rail traffic over a new rail line

proposed for construction and operation. This threshold is contained in 49 CFR 1105.7(e)(5).[8] If the line is not located in either a Class I or a nonattainment area, pollutant emissions from rail traffic would be quantified only if the proposed action would add eight or more trains per day to the line to be constructed.

Potential Effects

The project area is not in a Class I area. Calhoun County is in attainment for all six criteria air pollutants. Substantially fewer than eight train movements per day are expected to be added to the proposed line (two daily train movements are expected). Because of this, expected air pollutant emissions from rail operations over the proposed line have not been quantified. However, they are expected to be insignificant.

4.1.8 Noise

Assessment Methods and Evaluation Criteria

Train operations over the proposed rail line would raise ambient noise levels in the immediate vicinity of the line.

The Board applies a threshold level of rail traffic increase for determining whether to quantify noise that would be generated by rail traffic over a new rail line proposed for construction. This threshold is contained in 49 CFR 1105.7(e) (6).[9] If a proposed action

[8] It should be noted, however, that this threshold is applied with flexibility; SEA finds it a useful guide in a preliminary assessment of the need for more detailed analysis. When circumstances warrant, SEA will examine air quality impacts of a proposed rail line construction even though proposed traffic levels do not exceed the threshold noted here. Precedence for use of such thresholds was established in Finance Docket (F.D.) 30400, Santa Fe Southern Pacific Transportation Company; Merger the Atchison, Topeka and Santa Fe Railway Company and Southern Pacific Transportation Company Environmental Assessment served November 1, 1985, at 32, 33, and 44, and F.D. No. 3200, et.all., Rio Grande Industries, Inc.; SPTC Holding, Inc.; The Denver Rio Grande and Western Railroad Company-Control-Southern Pacific Transportation Company. Environmental Assessment, served May, 1988, page 2.

[9] It should be noted, however, that SEA applies this threshold with flexibility, finding it a useful guide in a preliminary assessment of the need for more detailed analysis. When circumstances warrant, SEA will examine noise impacts of a proposed rail line construction even though proposed traffic levels do not exceed the threshold noted here.

would add eight or more trains per day to the line to be constructed, noise[10] to be generated by operations over the line must be quantified and sensitive receptors would to be identified.

Potential Effects

As projected train operations over the proposed line fall substantially short of the threshold noted above, SEA has not quantified the potential increase in noise levels due to such operations. However, the potential increase in noise should be fairly minimal due to the low

rail traffic level; also, the number of noise receptors would be relatively few, as the line would pass through a primarily rural area, with only two residences within 2,500 feet of the proposed rail line.

4.1.9 Cultural Resources

Assessment Methods and Evaluation Criteria

SEA conducted a survey for cultural resources in the vicinity of the proposed project. The research methodology employed during this project was developed to identify prehistoric and historic archaeological sites and site potential within the proposed alignment, to assess the significance of those resources and their potential to be eligible for inclusion in the National Register of Historic Places, and to make recommendations for the treatment of those resources. These tasks were accomplished through a literature review, examination of archaeological site files at the Texas Archaeological Research Laboratory in Austin, and intensive pedestrian survey, shovel testing, and reconnaissance of the project area.

Potential Effects

One archaeological site (41CL93) was recorded in a cultivated field near the southwest bank of the Chocolate Bayou, as well as two non-site, modern shell scatters and an isolated find in the Aqua Dulce Creek. Site 41CL93 consists of a scatter of historic artifacts (bottle glass, stoneware, whiteware, window glass, concrete, tile, animal bone) from a farmstead dating to sometime between the 1880s and 1930s. The farmstead was observed on the 1929 aerial photograph of the area, but not on later topographic maps. The two shell scatters are the results of shell being used as road fill and bridge stabilization. The isolated find, a piece of bone and rusted nail, was identified in the cutbank of the creek channel. None of these sites are considered eligible for inclusion in the National Register of Historic Places. The proposed construction would therefore, have no effect on historic properties. The Texas Historical Commission has concurred with this finding.

4.1.10 Visual and Aesthetics

[10] A land use or facility where sensitivity to noise or vibration is considered.

Assessment Methods and Evaluation Criteria

SEA reviewed the effect of the proposed rail line on the landscape and visual context of the project area. Significant adverse effects would result from the intrusion of visual elements that are out of character with the current rural and industrial settings.

Potential Effects

The addition of a rail line would cause insignificant alterations to the visual environment within the study area. Along most of the alignment, the rail line would run at grade and would not introduce any major intrusion to the existing visual setting of the area. The new alignment
would, however, introduce visual changes to the local landscape in the following circumstances:

- At grade separations for US 87 and State Highway 35; and
- At crossings for the Aqua Dulce Creek, the East Coloma Creek, the Chocolate Bayou, and other waterway crossings.

Although the facilities noted above would require new structural elements (i.e., bridges and culverts), all would be in keeping with the surrounding visual character. Each of the proposed grade separations would reflect design standards approved by TxDOT and would be consistent with other such structures throughout the area. Similarly, the new drainage and waterway crossings would consist of standard designs, which minimize extraneous structural elements. These below-grade structures also should blend in with the existing environs.

4.1.11 Energy Resources

Assessment Methods and Evaluation Criteria

SEA assessed the effects of the proposed action on energy consumption. Significant energy effects would occur if the proposed action (1) results in a substantial increase in energy consumption, (2) adversely affects the transportation of energy resources or recyclable commodities, or (3) causes diversions from rail to motor carriers.

Potential Effects

Operation of construction equipment and delivery of construction materials would result in energy consumption (primarily diesel fuel). However, the energy consumption would be insignificant and of a temporary nature.

The proposed rail line would intersect eight existing roadways in the project area. The two

principal highways, US Highway 87 and State Highway 35, are planned to be grade-separated. Therefore, there would be no delays to vehicle traffic at those roadways and the proposed action would not result in any significant increase in regional energy consumption. The proposed rail line would cross the other six roadways at grade. Although some vehicles would be delayed during train passages (see Section 4.1.4), the increase in energy consumption due to these short delays would be insignificant.

As previously discussed, construction of the proposed rail line would result in the two new train trips per day. However, BNSF expects to capture existing rail traffic from UP. If this diversion occurs, the effect of the new BNSF operations is not expected to increase regional energy consumption.

No UCC traffic is expected to be diverted to or from other transportation modes.

4.1.12 Construction Impacts

Assessment Methods and Evaluation Criteria

SEA evaluated the potential for short-term adverse effects associated with the construction of the proposed rail line.

Potential Effects

Construction of the new alignment would include site preparation and grading, rail bed preparation, ballast application, track installation, and bridge and culvert construction. Grade separations would also include construction of the overpasses and approaches at US 87 and State Highway 35. The construction zone is anticipated to be limited to the existing 90-foot right-of-way. Borrow material would be obtained from local sources.

The construction may involve excavation from or the placement of dredged or fill material into "waters of the United States" including designated wetlands. This potential impact is discussed in greater detail in section 4.1.5 - Water Resources. Construction may result in increased sediment loading into some surface water bodies. BNSF would incorporate Texas Best Management practices (BMPs) for environmental protection, including appropriate measures for sediment and erosion control, for construction of the new rail line.

Wildlife would temporarily avoid habitat near the construction sites during construction, but would subsequently return to the area. Installation of new culverts in streams and channels would displace natural bottom habitats with concrete or metal pipe. Over time, however, siltation of the culvert bottoms should recreate the more natural bottom conditions.

The impacts of construction on vegetation in the area would be temporary. It is likely that opportunistic species would invade and reclaim these areas.

Air quality in the vicinity of the project area could be affected by temporary increases in emissions from construction vehicle diesel fuel combustion. The emission of these pollutants

would be minor and of short duration and would have insignificant effects on air quality. Construction activities would also result in the generation of fugitive dust emissions. Appropriate control measures would be used to minimize fugitive dust emissions, including the use of water or dust suppression chemicals.

Construction activities would also result in temporary increases in noise levels and intrusive noise for nearby noise-sensitive land uses.

Plans would be developed for the maintenance of access to roadways and to property during the construction. Construction activities would be carried out so as not to impede traffic or

access to property. The site would be landscaped and restored following construction activities.

4.1.13 Secondary and Cumulative Impacts

Assessment Methods and Evaluation Criteria

SEA examined the secondary and cumulative effects of the proposed project along with the direct effects, as required under the Council of Environmental Quality regulations (40 CFR 1508.25). Secondary effects are effects that are caused by the proposed action but are later in time or farther removed by distance. Cumulative effects are defined as the impacts on the environment that result from the proposed action when added to other past, present, or reasonably foreseeable future actions.

Potential Effects

Secondary Effects. SEA has determined that the proposed rail line should not cause effects related to the pattern of local land use, nor any related effects on air, water, or other natural systems.

Cumulative Effects. The only other major project in the vicinity of the new rail line is the proposed widening of 12 miles of U.S. Highway 87 between Placedo in Victoria County and Port Lavaca in Calhoun County by TxDOT. The project area for this highway improvement includes a new overpass carrying US 87 over the proposed rail line. As part of the project, TxDOT would also build new bridges and conduits over 11 drainage ditches crossed by the highway, and would relocate oil and gas pipelines and power and utility lines.

TxDOT completed an environmental assessment (EA) for the project in 1996. Impacts of this project on the environment, as described in the EA, include:

- The taking of 91 acres of prime farmland.

- Displacement of 4 homes, 1 business, and 14 other structures.
- Slightly increased noise levels.
- Elimination of 0.5 acre of wetlands and 2.5 acres of wildlife habitat. Restoration of similar habitat on the right-of-way would mitigate this loss.
- Minor additional stormwater runoff.
- Temporary construction impacts.

TxDOT would implement the US 87 widening project two years after the initiation of construction of the proposed rail line. Another planned construction project is the expansion of the UCC North Yard. This UCC project would be constructed at approximately the same time as BNSF's proposed rail line and would impact a minor amount of range land. The

proposed expansion of the UCC North yard is not a part of this project and would not require Board action.

The cumulative effects of the US 87 widening with the Seadrift Build-In project include impacts to a larger amount of agricultural lands and wetlands than those experienced under the rail line project alone. The combined projects would remove approximately 165 acres of land from agricultural use and convert it to highway and railroad right-of-way. This total, however, represents less than 0.02 percent of the two-county total of agricultural lands. The combined wetland impacts of the two projects would be approximately 0.53 acre; however, restoration/creation within the transportation rights-of-way would mitigate this loss. In addition, both projects would result in minor increases in stormwater runoff but would be controlled through use of Best Management Practices (BMPs). Construction impacts would occur in sequence and are not expected to result in adverse cumulative construction impacts.

Another planned construction project is the expansion of the UCC North Rail Yard. This UCC project would be constructed at approximately the same time as BNSF's proposed rail line. UCC states that this construction activity would impact a minor amount of range land. The proposed expansion of the North Rail Yard is not a part of this project and would not require Board action. Generally, the expansion of an existing rail yard within existing right-of-way is not considered a major Federal action and is not subject to review under the National Environmental Policy Act.

4.2 POTENTIAL ENVIRONMENTAL IMPACTS OF ALTERNATIVE ACTIONS

4.2.1 No-Build Alternative

If the No-build Alternative were implemented, the proposed rail line connection would not be constructed or operated. Therefore, the current land use and other existing environmental conditions would remain unchanged. Moreover, the no-build alternative would not satisfy the purpose or needs identified for the project. Under the no-build alternative, BNSF would not obtain access to the UCC facility and the potential local employment benefits of the BNSF proposal would not occur. Also, according to BNSF, the no-build alternative would

preclude BNSF from providing competitive service to UCC.

4.2.2 Build Alternatives

As discussed in Section 2.3, SEA identified the Property Alignment Alternative as the environmentally preferable alternative. Therefore, the potential environmental effects of the other build alternatives considered, but not carried forward, were not evaluated in detail.

5

AGENCY CONSULTATION AND MITIGATION

This chapter summarizes SEA's consultation with Federal, regional, state, and local agencies and officials regarding the proposed construction and operation of a rail line between Kamey and Seadrift, Texas, and SEA's recommended mitigation measures.

5.1 AGENCY COORDINATION

5.1.1 Consultation

Agency consultation activities were undertaken with federal, regional, state, and local agencies to inform them about the proposed construction, to identify issues of concern, and to obtain information about environmental resources within the project study area.[1] Specifically, in February and March 2001, SEA sent consultation letters to Federal, state and local agencies introducing the proposed project, describing the alternatives, and requesting that any concerns be identified. Early consultation was to provide the agencies and officials with an opportunity to provide input at an early stage in the environmental process, prior to the preparation of the Draft EA. Each consultation letter included a map of the study area.
A list of the agencies consulted is provided in Appendix D.

In addition, some of these agencies were also contacted by BNSF while preparing the environmental report that accompanied the Waiver Application.

5.1.2 Summary of Agency Comments

This early notification and coordination allowed for timely identification, evaluation, and resolution of environmental and regulatory issues during preparation of the Draft EA. Although most of the responding agencies did not have any comments or concerns about the scope of

[1] BNSF also conducted independent community outreach as part of this project. BNSF community outreach activities focused on project planning and development of alternatives for the proposed rail line. BNSF sought to include all potentially interested parties in the meetings. The development of project alternatives considered all substantive comments received.

the project, some agencies requested that specific issues be discussed in the Draft EA. The following is a summary of comments received during the consultation process.

United States Department of Agriculture – Natural Resources Conservation Service (March 15, 2001)

- The local landowners and farmers are concerned that the proposed project will exacerbate existing problems with drainage and flooding.
- The proposed construction should include adequate structures to maintain the flow of water so that the rail line does not act as a dam to contain water.
- The project engineer should coordinate closely with the appropriate Calhoun County Drainage Districts.

Texas Historical Commission (March 27, 2001)

- The project proponent should coordinate directly with the Texas State Historical Preservation Officer under the Section 106 review process, providing specific information as requested for timely review of the project.
- The Federal agency (or its consultants) should contact Native American tribes directly to determine potential impacts to their religious sites.

Texas Parks and Wildlife Department (July 3, 2001)

- The Department recommends minimizing clearing of riparian vegetation as much as possible and using enhanced erosion control measure to reduce the potential of sedimentation into the water bodies associated with bridges, culverts, and drainage structures.
- The Department recommends minimizing disturbance to existing vegetation, particularly avoiding any standing mature trees or brush in the area.

United States Department of Interior - Fish and Wildlife Service (July 31, 2001)

- The Service provided updated information on Federally listed endangered and threatened species, as well as proposed species, candidate species, and species of concern.
- The Service recommends that brush clearing activities avoid the peak nesting periods (March - August) and be limited to only the performance and completion of the proposed project.
- Construction activities near riparian zones should be carefully designed, and, if vegetation clearing is needed in these riparian areas, they should be revegetated with native wetland and riparian vegetation to prevent erosion or loss of habitat. Denuded and/or disturbed areas should be revegetated with a mixture of native legumes and grasses.
- If above suggestions are followed, the Service believes that Federally listed species would not likely be impacted by the proposed project action.

Copies of the agency comment letters are provided in Appendix D.

5.2 SEA RECOMMENDED MITIGATION

Based on the information available to date, consultations with appropriate agencies, and extensive environmental analysis, SEA developed preliminary environmental mitigation measures to address the environmental impacts of the proposed construction and operation.

SEA emphasizes that the recommended environmental mitigation measures[2] in the Draft EA are preliminary and it invites public and agency comments on these proposed environmental mitigation measures. In order for SEA to effectively assess the comments, it is critical that the public be specific regarding any desired mitigation and the reasons for it.

SEA will make its final recommendations on environmental mitigation to the Board in a post-EA after considering all public comments on the Draft EA and conducting further environmental analysis and agency consultation, as appropriate. The Board will then make its final decision regarding the project and any environmental conditions it might impose. When considering whether to grant final approval on the proposed transaction, the Board will consider the potential environmental effects and the approximate cost of any environmental mitigation it might impose on the project. SEA preliminarily recommends that any final decision by the Board approving the proposed rail line construction and operation be subject to the following mitigation measures.

SEA recommends that the Board impose the following mitigation measures in any decision approving the construction waiver for the proposed rail line construction in Seadrift, Texas.

5.2.1 General Mitigation Measures

SEA's recommendations include, but are not limited to, the following general mitigation conditions:

Land Use and Zoning

1. BNSF shall limit ground disturbance to only the areas necessary for project-related construction activities.

2. BNSF shall ensure that all areas disturbed by project-related construction activities which are not located on the railroad's property (such as access roads, haul roads, crane pads, and borrow pits) are promptly restored as closely to their original condition, as is practical, following conclusion of project-related construction activities at that site.

3. BNSF shall commence reclamation of disturbed areas, as soon as practicable, after project-related construction ends along a particular stretch of rail line. The goal of reclamation shall be the rapid and permanent reestablishment of ground cover on disturbed areas. BNSF shall monitor reclaimed areas for one year and shall reseed vegetative cover as necessary.

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[2] The Board has limited authority to impose conditions to mitigate potential environmental impacts. As a government agency, the Board can only impose conditions that are consistent with its statutory authority Accordingly, any conditions the Board imposes must relate directly to the transactions before it, must be reasonable, and must be supported by the record before the Board. Thus, the Board's practice consistently has been to mitigate only those impacts that result directly from the prososed action. The Board typically does not require mitigation for pre-existing environmental conditions.

Transportation Systems

4. BNSF shall coordinate at-grade crossing construction with the Texas Department of Transportation and Calhoun County in order to minimize traffic delay during crossing construction. BNSF shall use appropriate signs and barricades to control traffic disruptions during construction.

5. During project-related construction of the at-grade crossings at Boyd Road and Sikes Road, BNSF shall allow for the movement of emergency vehicles and other vehicles either by flagging, temporary detours or bypasses as may be required by the roadway authority having jurisdiction.

6. BNSF shall maintain new grade crossing warning devices according to Federal Railroad Administration track safety standards (49 CFR Part 213).

Safety

7. In undertaking project-related construction activities, BNSF shall use construction materials, construction standards, and safety practices which either conform to BNSF standards or which are recommended by the American Railway Engineering and Maintenance of Way Association (AREMA). BNSF shall inspect and maintain the track in compliance with Federal Railroad Administration standards.

8. As agreed to by BNSF, the public at-grade crossings at Boyd Road and Sikes Road will be equipped with active warning devices, subject to the direction and approval of the Texas Department of Transportation.

9. BNSF shall develop internal emergency response plans for construction to allow for agencies and individuals to be notified in case of an emergency. BNSF shall provide the emergency response plans for construction to state and local entities. BNSF shall provide local emergency response organizations with the schedule for construction throughout the project area, including the sequence of construction of grade crossings.

10. BNSF shall notify the National Response Center, the Texas Natural Resource Conservation Commission, and the appropriate state department of natural resources, in the event of a reportable hazardous material release with the potential to affect wetlands or wildlife habitat(s).

11. BNSF shall transport all hazardous materials in compliance with U.S. Department of Transportation Hazardous Materials Regulations (49 CFR Parts 171 to 180). BNSF shall provide, upon request, local emergency management organizations with copies of all applicable Emergency Response Plans. In the case of a hazardous material incident, BNSF shall follow appropriate emergency response procedures contained in its Emergency Response Plans.

Water Resources

12. BNSF shall obtain all necessary Federal, state, and local permits if construction activities require the alteration of wetlands, ponds, lakes, or streams or if these activities would cause soil or other materials to wash into these water resources. BNSF shall use appropriate techniques to minimize impacts to water bodies and wetlands.

13. As agreed to by BNSF, it shall work with the local drainage district to provide appropriate access to BNSF property as may be needed for maintenance of the Colorma Creek drainage channel

14. To minimize sedimentation into water bodies, BNSF shall use Best Management Practices, such as silt screens and straw bale dikes, to minimize soil erosion, sedimentation, runoff, and surface instability during project-related construction. BNSF shall disturb the smallest area practicable around any waterway, and shall consult with the Natural Resource Conservation Service, Texas Parks & Wildlife Department, Texas Natural Resource Conservation Commission, and the Texas Department of Transportation to ensure proper revegetation of disturbed areas as soon as possible following construction activities related to this project.

15. For right-of-way maintenance, for those instances in which BNSF uses contractors to apply herbicides, BNSF shall use only contractors trained in herbicide application and shall require those contractors to follow label directions in applying herbicides. BNSF shall also require those contractors to use only herbicides registered for such use with the U.S. Environmental Protection Agency and to follow all applicable state regulations regarding the use of those herbicides. BNSF shall ensure that herbicides are applied in such a manner as to minimize the amount potentially entering waterways.

16. BNSF shall establish staging areas for project-related construction equipment in areas that are not near water bodies, whenever practicable. When project-related construction activities, such as culverts and bridge work require work in stream beds, BNSF shall conduct these activities, to the extent possible, during low flow periods.

17. BNSF shall regularly inspect and maintain culverts, and bridge abutments to avoid potential flooding and stream flow alteration. BNSF shall design all project-related drainage structures to pass a 100-year flood.

Biological Resources

18. BNSF shall use Best Management Practices to control erosion, runoff, and surface instability during construction, including seeding, fiber mats, straw mulch, plastic liners, slope drains, and other erosion control devices. Once the track is constructed, BNSF shall establish

vegetation on the embankment slope to provide permanent cover and prevent potential erosion. If erosion develops, BNSF shall take steps to develop other appropriate erosion control procedures.

Air Quality

19. BNSF shall comply with all applicable Federal, state, and local regulations regarding the control of fugitive dust. Fugitive dust emissions created during construction shall be minimized by using such control methods as water spraying, installation of wind barriers, and chemical treatment.

20. BNSF shall maintain project-related construction and maintenance vehicles in good working order with properly functioning mufflers to control air emissions.

Noise and Vibration

21. BNSF shall control temporary noise from construction equipment through the use and maintenance of muffler systems on machinery.

22. BNSF shall comply with Federal Railroad Administration regulations (49 CFR Part 210) establishing decibel limits for train operations.

Cultural Resources

23. If previously undiscovered archaeological remains are found during construction, BNSF shall cease work and immediately contact the Texas Historical Commission regarding appropriate measures to protect the resource.

Community Relations

24. BNSF shall establish a Community Liaison to consult with landowners and agencies for a period of one year following start-up of operations on the new rail line. BNSF shall also provide the name and phone number of the Community Liaison to appropriate local officials.

25. As agreed to by BNSF, it shall continue to maintain communications with the community through the Community Advisory Panel and Near Neighbor organization prior to and throughout construction activities to keep local officials informed of the project status.

26. BNSF shall provide its construction schedule to affected farmers and ranchers to allow them to determine whether they should continue to crop or graze right-of-way areas or discontinue such activities due to impending construction activities related to this project.

5.3 CONCLUSION AND REQUEST FOR COMMENTS

Based on the information provided from all sources to date and its independent analysis, SEA preliminarily concludes that construction and operation of the proposed rail line would have no significant environmental impacts if the Board imposes and BNSF implements the mitigation recommended above. Therefore, the EIS process is unnecessary in this proceeding.

SEA specifically invites comments on all aspects of this Draft EA, including suggestions for additional mitigation measures. SEA will consider all comments received in response to the EA in making its final recommendations to the Board. The Board will consider the entire environmental record, SEA's final recommendations, including final recommended mitigation measures, and the environmental comments in making its final decision in this proceeding.

Comments (an original and 10 copies) should be sent to: Vernon A. Williams, Secretary, Surface Transportation Board, 1925 K Street NW, Suite 700, Washington, D.C. 20423. The lower left-hand corner of the envelope should be marked: Attention: Ms. Phillis Johnson-Ball, Environmental Comments, Finance Docket No. 34003. Questions may also be directed to Ms. Johnson-Ball at this address or by telephoning (202) 565-1530.

Date Made Available to the Public:	September 17, 2001
Comment Due Date:	October 17, 2001

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